

Release Notes

hp StorageWorks Command View EVA

Product Version: 3.3

Fourth Edition (December 2004)

Part Number: T3268-88102

This document contains the most recent product information about the HP StorageWorks Command View EVA 3.3 software and documentation.

For the latest versions of storage documentation, access the HP storage web site at <http://www.hp.com/country/us/eng/prodserv/storage.html>.



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Release notes contents

These release notes cover the following major topics:

- [Intended audience](#), page 3
- [System support information](#), page 4
- [Browser support](#), page 8
- [Product enhancements](#), page 8
- [Command View EVA license management](#), page 8
- [Operating constraints](#), page 9
- [Avoiding problem situations](#), page 10
- [Command View EVA v3.3 known issues](#), page 11
- [SMI-S EVA v3.3 information](#), page 15

Intended audience

This document is intended to assist customers who are installing or using HP StorageWorks Command View Enterprise Virtual Array (EVA) v3.3 in conjunction with an installation of a HP StorageWorks EVA3000 or EVA5000.

System support information

This section contains information about the prerequisites for running Command View EVA v3.3 software and the documentation available for use with Command View EVA v3.3 and related products.

Command View EVA v3.3 minimum requirements

Before you install Command View EVA v3.3, you must install the software listed in [Table 1](#). The table shows the minimum version of the software required and explains how to check the current version.

Table 1: Minimum software requirements

Software	Minimum Version Required	How to Check Current Version
HP StorageWorks Virtual Controller Software (VCS)	3.010	In Command View EVA: Expand an Initialized Storage Cell . Expand the Hardware Folder . Expand Rack1 . Expand Controller Enclosure . Select either controller. Verify that the Software Version field displays 3.010 .
When installed on a Storage Management Appliance, HP OpenView Storage Management Appliance Software	v2.1	From the Storage Management Appliance Home Page: Click Help on the Storage Management Appliance primary toolbar. View the version number displayed on the Welcome page.
When installed on a Windows-based management server	Windows Server 2003 EE (32 bit)	View the version number displayed on the Welcome page.
When installed on an HP ProLiant Server, SmartStart	v7.1	Refer to the CD label.
Visit the Storage Management web site at: http://h18006.www1.hp.com/products/sanworks/managementappliance/index.html and download all mandatory updates and patches.		

Table 2: Minimum hardware requirements

Hardware
EVA3000 and/or EVA5000 storage array systems
If installing on an SMA, HP OpenView Storage Management Appliance I, II, or III
If not installing on an SMA, the required Windows-based management server using Windows Server 2003 EE (32-bit) and a supported FC HBA.

Enterprise Virtual Array documentation

Enterprise Virtual Array documentation is available at

<http://h18006.www1.hp.com/storage/arrayssystems.html>

On this web site:

1. Under **Virtual Array Systems**, select your EVA model.
2. Select **Technical Documentation** under **Product Information**.

Software compatibility matrices

The Enterprise Virtual Array uses various firmware and software that work with each other to manage the storage solution. During installation, it is important to ensure that all of the software and firmware versions are compatible. This section provides tables that summarize which versions of software are compatible with each other. Use [Table 3](#), [Table 4](#), [Table 5](#), [Table 6](#) to ensure that you are using compatible software versions.

The HP StorageWorks Command View EVA v3.3 software is compatible with the following:

Software

- HP StorageWorks Virtual Controller Software (v3.010 and v3.014, though v3.020 is the recommended version)
- HP OpenView Storage Management Appliance software v2.1 when installed on an SMA
- Windows Server 2003 EE (32-bit)

Hardware

- HSV110 controller (EVA5000)
- HSV100 controller (EVA3000)
- HP OpenView Storage Management Appliance I, II, or III

[Table 3](#) lists the compatible versions of element manager software and storage system software. The recommended VCS version is VCS v3.020. If you are running a version of VCS that is not listed in this table (for instance, VCS v1.010), you should upgrade to a later version of VCS.

Note: After you have upgraded a storage system to v3.000 (or higher), you should not downgrade the initialized storage system to v2.xxx. If you attempt to downgrade an initialized storage system, you will lose any configuration information or data in that storage system. All existing data will be destroyed when you downgrade from v3.xxx to v2.003 (or higher).

Table 3: Element Manager software and Storage System software compatibility

Storage System Software Version	HSV Element Manager v2.0a	Command View EVA v2.1	Command View EVA v3.0	Command View EVA v3.0a	Command View EVA v3.1	Command View EVA v3.2 and v3.3
VCS v2.006	No	Yes	Yes	Yes	Yes	No
VCS v3.000	No	No	Yes ¹	Yes ¹	Yes ¹	No
VCS v3.001	No	No	Yes	Yes	Yes	No
VCS v3.010	No	No	No	No	Yes	Yes
VCS 3.014	No	No	No	No	Yes	Yes
VCS v3.020	No	No	No ²	No ²	No	Yes
¹ VCS v3.000 cannot be used on an EVA3000 system. ² While Command View EVA v3.0, v3.0a, and v3.1 can manage controllers running VCS v3.020, you will not have access to any v3.020-specific features. HP recommends that you upgrade to Command View EVA v3.2.						

[Table 4](#) lists the versions of VCS each Enterprise Virtual Array is compatible. The EVA3000 storage system uses the HSV100 controller, and the EVA5000 storage system uses the HSV110 controller.

Table 4: Enterprise Virtual Array type and VCS compatibility

	EVA3000	EVA5000
VCS v2.002	No	Yes
VCS v2.003	No	Yes
VCS v2.004	Yes	No
VCS v2.005	Yes	Yes
VCS v2.006	Yes	Yes
VCS v3.000	No	Yes
VCS v3.001	No	Yes
VCS v3.010	Yes	Yes
VCS v3.014	Yes	Yes
VCS v3.020	Yes	Yes

Table 5 lists the compatible versions of element manager software and Storage Management Appliance software. When Command View EVA 3.3 is installed on a Storage Management Appliance, it is compatible with the Storage Management Appliance software v2.1. If you are running Storage Management Appliance software v1.0c or Storage Management Appliance software v2.0, you must upgrade the Storage Management Appliance software to v2.1.

Table 5: Element Manager software and Storage Management Appliance software compatibility

Storage Management Appliance Software	HSV Element Manager v2.0a	Command View EVA v2.1	Command View EVA v3.0	Command View EVA v3.0a	Command View EVA v3.1, v3.2, and v3.3
v1.0C	Yes	No	No	No	No
v2.0	Yes	Yes* *requires Service Pack 1a.	Yes* *requires Service Pack 3.	Yes* *requires Service Pack 4	No
v2.1	No	No	No	Yes	Yes

Table 6: Windows compatibility matrix

Windows-based server	Command View EVA 3.3
Windows Server 2003 EE (32 bit)	Yes

For future product support release information, visit

<http://welcome.hp.com/country/us/eng/prodserv/storage.html>

This web site provides downloadable files for storage products.

To download future Storage Management Appliance updates, visit

<http://h18006.www1.hp.com/products/sanworks/managementappliance/index.html>

You can access the latest update by choosing **Software Updates** under **Product Information**.

Browser support

[Table 7](#) describes browser support by operating system. Using browser versions other than the recommended versions could result in some pages not displaying correctly (blank or distorted pages) or some buttons not working.

Table 7: Browser support by operating system

Operating System	CV EVA Browser	JRE Version
Windows 2000 server	Internet Explorer 6.0.2800.1106 (128-bit)	JRE 1.4.1_03, 1.4.1_04
Windows 2000 Advanced Server, SP4 (32-bit)	Internet Explorer 6.0.2800.1106 (128-bit)	JRE 1.4.1_03, 1.4.1_04
Windows Server 2003 Enterprise, SP1 (IA32)	Internet Explorer 6.0.3790 (SP1)	JRE 1.4.1_03, 1.4.1_04
Windows 2000 Professional	Internet Explorer 6.0.2800.1106 (128-bit)	JRE 1.4.1_03, 1.4.1_04
Windows XP Professional	Internet Explorer 6.0.2800.1106 (128-bit)	JRE 1.4.1_03, 1.4.1_04

Product enhancements

This release enables Command View EVA to be installed on a server running Windows Server 2003 EE (32-bit) in addition to the HP OpenView Storage Management Appliance.

Command View EVA license management

OpenView SOM implements a “mixed” licensing management practice. Command View EVA employs a paper-based license outlining the licensing terms and conditions, while Storage Area Manager/Storage Node Manager employs electronic licensing that requires license keys to be registered (refer to the License Entitlement Certificate shipped with your LTU product number for more information regarding acquiring Storage Node Manager license keys). Command View EVA does not require an electronic license key for installation or use.

Operating constraints

This section contains operating constraints for HP StorageWorks Command View EVA 3.3.

Command View EVA 3.3. cannot be removed from a Storage Management Appliance

The installation process cannot be cancelled, and once the installation is completed (on the Storage Management Appliance), the product cannot be removed.

Only one EVA3000 or EVA5000

Only one EVA3000 or EVA5000 can be managed when installing Command View EVA on an application server.

Storage Management Appliance configuration restriction for HSG and HSV controllers in a heterogeneous SAN environment

HP recommends that one Storage Management Appliance manage a maximum of 25 HSG and 16 HSV storage systems.

Windows-based server configuration restriction for HSG and HSV controllers

HSG-based storage arrays cannot be managed together with HSV-based arrays when using a Windows-based server. Only HSV storage systems can be managed in this configuration.

Handling an installation failed message

If you receive an **Installation Failed** message during installation, retry the installation. If the error persists, contact your authorized HP service representative for assistance.

When upgrading to CV EVA v3.3 from CV EVA v3.0 or an earlier version of CV EVA, you may see a message stating `Install is Complete` followed three lines later by a message stating `Install is Aborted`. In this situation, the installation has failed.

Command View EVA, SSSU, and VCS version matrix

Table 8 shows the versions of Command View EVA and the versions of Storage System Scripting Utility (SSSU) and VCS supported by those versions.

Table 8: Command View EVA, SSSU, and VCS version matrix

Command View EVA Version	SSSU Version	VCS Version
2.0a, 2.1	v4 Build 18	2.0xx
3.0	Build 72 for version 3.0	2.0xx, 3.0xx
3.1	Build 8 for version 3.01	2.0xx, 3.0xx
3.2	Build 7 for version 3.2	2.0xx, 3.0xx
3.3	Build 7 for version 3.2	2.0xx, 3.0xx

Avoiding problem situations

This section describes how to avoid problem situations specific to Command View EVA v3.3.

Managing EVAs with multiple management agents

If you have multiple management servers, HP strongly recommends that all of your EVAs be managed by a single management server at any given time.

Avoiding slow response times and timeouts caused by multiple Command View EVA v3.3 users

To avoid timeouts or slow response times, HP recommends the following.

- Only one user at a time on Command View EVA v3.3
- Only one SSSU session at a time on Command View EVA v3.3
- Do not use the Command View EVA v3.3 GUI if SSSU is being used to run controller failovers.

Clustered servers

Command View EVA 3.3 is not supported on clustered servers.

Command View EVA v3.3 known issues

This section contains information about known issues in Command View EVA v3.3.

Restarting a single controller

The restarted controller may either display in the Unmappable Hardware Folder with a red X or will stay in the Hardware Rack Folder with a red X, even though the controller has been rebooted. Clicking the other controller will display a Lock Busy Error. To remove the red X and to move the controller to the Unmappable Hardware Folder, click the red X.

CV EVA window open when adding copy set using CA User Interface

Command View EVA may occasionally show a warning status when there is no problem. Click the object or click **Refresh** to update the view with the current status.

DR folder warning icon

The Data Replication Folder icon may occasionally show a warning status when there is no problem with any of the DR groups within the folder. Click the DR folder to remove the warning status.

Improper error message (through SSSU) on password-protected systems

When a controller pair has been password-protected and the password has not been added in Bridge, SSSU commands will display Error: API unable to get the lock.

Upgrade status page does not display

During an upgrade from VCS v2.0x to VCS v3.0x, the success status page may not display, and the upgrade may or may not have succeeded. You may see an error page stating that the command could not be completed. If this occurs:

1. Click **OK** on the error page.
2. Browse to the HSV on which you attempted the upgrade.
3. View the **System Version** on the Initialized System Properties page. If the displayed value is 3.0x, the upgrade was successful.
4. If you do not see the value of 3.0x, go to the Session pane.
5. Click on **Agent Options**.
6. Choose **Discover Storage Systems**.
7. Click **OK**.

If the upgrade still did not succeed, repeat the code load process.

Changing the Storage Management Appliance password

You cannot change the Storage Management Appliance password from within Command View EVA. To change the password on the Storage Management Appliance:

1. From the **Agent Options** screen, choose **Remote Access Password Options**.

This will redirect you to the **Management Appliance Home Page**.

2. Under the **Settings** tab, navigate to the **Change Password** screen.
3. Change the password on this screen.

Changing the Windows-based server password

1. Navigate to the Launch page (<https://<hostname>:2381>).
2. Enter your user name and password and then click **Login**.
3. Click the **Settings** tab.
4. Navigate to the **Change Password** screen and check **Change the password** on this screen.

Windows-based server security settings

The security setting in your browser must be properly configured to allow access to the objects on the browser pages. To do this:

1. Click **Start**.
2. Click **Control Panel**.
3. Click **Java Plug-in**.
4. Click the **Browser** tab.

Choose the browser you plan to use with Command View EVA.

Disk names higher than disk count

Adding disks, removing disks, or changing the storage cell Device Addition property from Manual to Automatic may cause disks to be named and renamed. Command View EVA v3.3 ensures that disk names are distinct by incrementing the last three digits of the name. This naming method can result in disks named with a number higher than the total disk count for a particular system.

For example, if you have five disks named disk 001 through disk 005, and remove disk 003 and disk 004, the next time you insert 003 and 004 disks, Command View EVA v3.3 will name them 006 and 007.

SSSU responds with server down error while still able to browse to Command View EVA

In rare instances, SSSU loses communication with Command View EVA and reports that it is down, stopped, or restarting even though it is possible to browse to Command View EVA v3.3. To fix this, restart Command View EVA.

SSSU responds with neither success nor failure message

In some instances when SSSU is run from a host with a heavy I/O load, SSSU may issue the following error:

```
Error: Neither SUCCESS or FAILURE were returned by this command.
```

If this error occurs, verify the success or failure of the command, then retry the command, if necessary. If the error persists, contact your HP authorized service representative for troubleshooting assistance.

Moving objects between folders-SSSU restriction

In the Command View EVA GUI, you can move objects between folders. This feature is not supported in SSSU.

Unknown Storage System

In some instances, Command View EVA may display a storage cell as an Unknown Storage System. This state occurs when Command View EVA was previously communicating with the controllers but the controllers have stopped responding. Conditions that can cause this include:

- Controllers are being powered off
- Controllers are restarting
- Controllers are experiencing a heavy I/O load
- Previous operation is taking a long time to complete
- Storage Area Network (SAN) problem exists

The Unknown Storage System condition recovers automatically when Command View EVA is able to communicate again.

Page not found/Connection lost/neither success nor failure error

You may experience a condition where the symptom is an HTTP 404 - File not found error in the browser or what appears to be a hung state in SSSU. The SSSU state may generate a No Object Found error or a Neither Success or Failure error. To resolve this:

- Wait a few seconds and the problem may resolve itself or
- Close all of your open browser windows, including the Storage Management Appliance and Command View EVA windows. SSSU does not need to be restarted.

If the problem persists after these steps, restart Command View EVA v3.3.

Scrolling function

In rare situations, the scrolling function of the navigation tree may not respond. If you encounter this behavior, refresh your browser window.

Event log messages use HSV Element Manager name

Event log messages may refer to Command View EVA by its former name, HSV Element Manager.

Discovery display issue

Errors may occur during discovery that affect the view of your configuration as displayed by Command View EVA. If you see duplicate storage cells or uninitialized storage cells you know to be initialized, restart Command View EVA. If that does not correct the problem, restart the Storage Management Appliance.

HTTP 400 Bad Request error

When browsing from a Windows 2003 64-bit machine, an HTTP 400 Bad Request message will appear if the browser is idle for ten minutes. The solution is to install the JRE 1.4.1_03 or JRE 1.4.1_04. If the proper JRE is not installed, refresh the browser by pressing **F5** and re-entering login information.

Links to applications fail to appear correctly on the System Management Homepage

After a reboot on some systems, the **command view eva** link may fail to appear in the **Other Agents** section of the System Management Homepage. In some cases, duplicate links to other applications may appear. When this occurs, a restart of any affected service is required by using the Windows Services dialog followed by a refresh of the browser. To restart the affected service:

1. Click **Settings** from the Start panel on your Windows server.
2. Click **Control Panel** and then **Administrative Tools**.
3. Click **Services** and select the service to stop.
4. Right-click and select **Stop** to stop the service.
5. Right-click and select **Start** to restart the service.

When creating DR Group the Failsafe mode and Write mode may not set initially to the desired values

When creating a DR Group, an attempt to set the Failsafe mode or Write mode to values other than the default values may fail. The DR Group will be created but may maintain the default settings. Verify the settings of the Failsafe mode and Write mode after DR Group creation. If the values are not the desired values, attempt to change and save these values again.

SMI-S EVA v3.3 information

SMI-S EVA v3.3 is supported on Command View EVA 3.3-supported systems. SMI-S v3.3 requires that Command View EVA v3.3 be installed. Command View EVA v3.3 must be installed before installing SMI-S EVA. If the Storage Management Appliance is running Command View EVA v2.1 or earlier, you must upgrade to Command View EVA v3.3. Refer to *HP StorageWorks Enterprise Virtual Array Getting Started Guide* for more information. You can view the latest copy of this document at

<http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex.jsp>

Other SMI-S EVA documentation

The SMI-S EVA documentation set also includes:

- HP StorageWorks Enterprise Virtual Array Updating Products Software Instructions.

Additional documentation is available at:

<http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex.jsp>

SMI-S EVA description

The Enterprise Virtual Arrays (EVA) use the Storage Management Initiative Specification (SMI-S), which is a new standard developed by the Storage Networking Industry Association (SNIA). SMI-S EVA v3.3 enables Common Information Model (CIM)-capable management software to manage EVAs using SMI-S v1.0.2. SMI-S EVA resides on the Storage Management Appliance. SMI-S EVA v3.3 is based on the Managed Object Format (MOF) 2.8.

SMI-S EVA features

SMI-S EVA provides the following features:

- **Profile**

- Array
 - **Subprofiles**
 - Access points
 - Backend ports
 - Cluster
 - Copy services
 - Location
 - LUN creation
 - LUN masking and mapping
 - Pool manipulation capabilities and settings
 - Software

- **Profile**

- Server

- **Indications - Events Capabilities**

- Process indications
- Lifecycle indications. Following are the lifecycle indications that SMI-S EVA supports:

- Select * from CIM_InstCreation where SourceInstance ISA CIM_ComputerSystem
- Select * from CIM_InstDeletion where SourceInstance ISA CIM_ComputerSystem
- Select * from CIM_InstModification where SourceInstance ISA CIM_FCPort and SourceInstance.OperationalStatus < > PreviousInstance.OperationalStatus
- Select * from CIM_InstModification where SourceInstance ISA CIM_ComputerSystem and SourceInstance.OperationalStatus < > PreviousInstance.OperationalStatus
- Select * from CIM_InstCreation where SourceInstance ISA CIM_Storagevolume
- Select * from CIM_InstDeletion where SourceInstance ISA CIM_Storagevolume

■ **Other Features**

- Service Location Protocol (SLP) discovery
- Java Authentication and Authorization Service (JAAS) based security
- Secure Sockets Layer (SSL)

Supported Operating Systems

SMI-S EVA v3.3 is supported on Storage Management Appliance software v2.1 for a Storage Management Appliance and Windows® Server 2003 EE (32-bit).

Command View EVA Minimum Revision Level

Command View EVA v3.3 must be installed on the server before installing SMI-S EVA. If the server is running Command View EVA v2.1 or earlier you must upgrade to Command View EVA v3.3. Refer to *HP StorageWorks Enterprise Virtual Array Getting Started Guide* for more information. You can get the latest copy of this document at:

<http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex.jsp>

Limitations

- The hardware WWNs attached to a LUN masking protocol controller will have the same OS type.
- Creation of a storage pool does not accept size as a parameter. The storage pool can be created from the given set of storage disks.
- SMI-S EVA does not support the job control subprofile and the indications of the copy services subprofile. All methods in the copy services are synchronous.
- SMI-S EVA removes the SLP component at uninstallation. Any other application that uses the SLP component will not work after uninstalling SMI-S EVA.
- SMI-S EVA supports access points subprofile only for top level computer systems.
- SMI-S EVA does not support indications for LUN masking subprofile.
- The C:\Program Files\Hewlett-Packard\sanmgr\cssi directory is not deleted after SMI-S EVA is uninstalled.